

**Redescription of *Falsomordellistena auromaculata* (Kôno),
with description of an allied new species from Japan
(Coleoptera: Mordellidae)**

Shigehiko SHIYAKE*

**カタビロヒメハナノミの再記載と近縁な1新種について
(鞘翅目：ハナノミ科)**

初宿成彦*

抄録：ニセヒメハナノミ(*Falsomordellistena*)属のうち、記載不十分なカタビロヒメハナノミ *F. auromaculata* (Kôno, 1928) について、タイプ標本を検鏡した上で、重要な標徴などについて観察を行い、図示して再記載した。また、本州に産する近縁な1新種を命名し、記載した。

Abstract: *Falsomordellistena auromaculata* (Kôno, 1928) which has been in lack of full description is redescribed with figures of important diagnoses after inspection of the type specimen. In addition, an allied species from Honshu is newly described.

Key Words: Coleoptera; Mordellidae; *Falsomordellistena*; type specimen; description; new species.

Falsomordellistena auromaculata (Kôno) was described in 1928 on the basis of only one female specimen from Sapporo, Hokkaido. Therefore, its description was not satisfactory and a revisional study has been needed. In this paper I redescribe the species with figures of important diagnoses including ridges of hind leg and male genitalia after inspection of the type specimen deposited at Hokkaido University. Additionally an allied species from Honshu is newly described with particular attention to the above features.

Observation methods

Antenna, maxillary palpus, fore and hind legs, male genitalia and 8th abdominal urosternum were temporarily slide-mounted and examined by a light microscope. Coloration and most of other external structures were observed by a stereoscopic microscope in dried form.

Depository of specimens

I examined the specimens of the following institutes or persons in Japan.

Collection of Mr. Takeichirô Hatayama (HATC), Yamanouchi-motomachi, Sumiyoshi-ku,

Contribution from the Osaka Museum of Natural History, No.337 (Accepted February 28, 1996)

* Osaka Museum of Natural History, Nagai Park 1-23, Higashi-sumiyoshi-ku, Osaka, 546 Japan

Osaka; Otaru Museum (OTM), Ironai Otaru, Hokkaido; Laboratory of Systematic Entomology, Faculty of Agriculture, Hokkaido University (SEHU), Kita 9 Nishi 9, Kita-ku, Sapporo.

Specimens without acronyms are deposited in the Osaka Museum of Natural History, and the registration number of each specimen is shown in a bracket following the original datum in order to give facility of reexamination.

Descriptions

Falsomordellistena auromaculata (Kôno, 1928)

(Fig.1 and 2)

Mordellistena auromaculata Kôno, 1928: 38; Kôno, 1936: 39; Nakane, 1957: 55.

Falsomordellistena auromaculata: Nomura, 1961: 81; Nomura, 1963: 252; Hatayama, 1985: 392.

Japanese name: Katabiro-hime-hananomi.

Description: Coloration (Fig. 2-A) basically reddish brown, elytra gradually darkened backwards, distal 7 segments of antenna and ridges on hind leg black.

Hairs on almost whole body blackish, but on humeralis of elytron, frons, metathoracic sternum, hind coxa, basal half of each abdominal sternum and femur yellowish with luster.

Eye egg-shaped without emargination and pubescent, facets fine. Tempora narrow, as wide as 2 facets. Antenna (Fig. 2-B) rather long, filiform and slightly serrate, 5th segment clearly larger than 4th, each of 4th to 10th 2.5 times in male and 1.9 times in female as long as wide. Maxillary palpus (Fig. 2-D) normal form of *Mordellistena*-type in both sexes, terminal segment securiform with short apical margin, penultimate segment not dilated. Pronotum a little wider than long, lateral margin very slightly sinuate at center in profile and converging anteriorly when seen above, anterior and posterior angles broadly rounded at vertex, apical margin normally protrudent, basal margin broad and a little protruding. Scutellum small, rounded-triangular. Elytra 2.8 times as long as their humeral breadth, 2.9 times as long as pronotum, converged posteriorly, apices broadly rounded. Apical margin of anal sternum not emarginate in both sexes. Pygidium normally long as in *Mordellistena*, acuminate, about 2/5 as long as elytron, substraight when seen laterally.

Penultimate segment of fore tarsus (Fig. 2-C) 1.2 times as long as wide, dorso-apical margin a little emarginate. Penultimate segment of middle tarsus almost same as that of fore tarsus. Outer spur of hind tibia relatively long, nearly 3/4 as long as inner one. Ridges on hind leg (Fig. 2-G) rather short, formulated as 4, 4, 2, 2; tibia usually provided with 4 (sometimes 5) short ridges, 1st tarsus with 4 (sometimes 5, rarely 3) short ridges, each 2nd and 3rd tarsus always with 2 oblique ridges.

Eighth abdominal urosternum in male (Fig. 2-E) rather large, 1.5 times as long as wide, apical lobe not protrudent, sinuated at apex and sparsely hairy.

Paramera of male genitalia (Fig. 2-B) resembling those of *Mordellistena*; left parameron with main lobe which is normally thick, not compressed and apically hairy, basal process slightly recognizable, ventral branch thick and a little shorter than the main lobe; right parameron

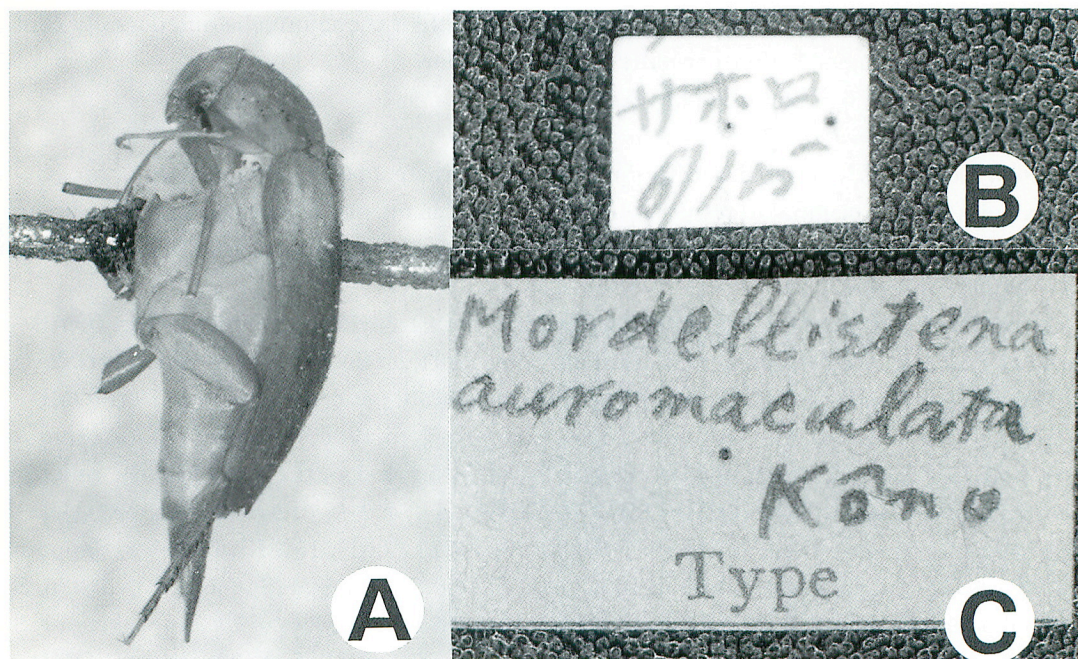


Fig. 1. *Falsomordellistena auromaculata* (Kôno). A, Holotype (♀); B and C, labels of the holotype.

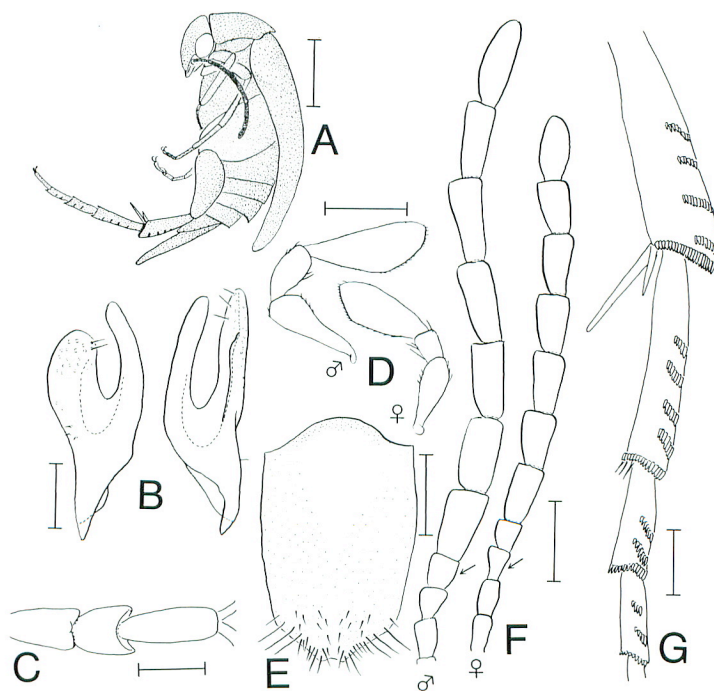


Fig. 2. *Falsomordellistena auromaculata* (Kôno). A, Lateral view (♂); B, paramera of genitalia; C, distal segments of fore tarsus; D, maxillary palpi; E, 8th abdominal urosternum; F, antennae (4th segment arrowed); G, hind leg. Scales: 0.25mm, except B and C of 0.1mm and A of 1.0mm.

with thick and wide main lobe, ventral branch longer than the main lobe and dorsally vent. Median lobe (aedeagus) rather normally long and slender.

Body length: ♂ 4.6 - 5.2mm, ♀ 4.8 - 5.0mm.

Materials examined:

[Holotype (Fig. 1)] ♀. "Saporo, 6/15" in Japanese characters of *katakana* (SEHU).

According to the original description (Kôno, 1928), this means "Sapporo, Hokkaido, Japan, 15.vi.1926, Dr. S. Matsumura". This species was monotypical when described, therefore, above is the type specimen.

[Hokkaido] 1 ♀, Moshiri, Horokanai, Sorachi Prov., 21.vii.1991, S. Shiyake leg. [OMD · 910721 · 001]; 2 ♂ & 1 ♀, Nopporo, Ebetsu-shi, 29.vi.1991, on flowers of *Hydrangea petiolaris*, S. Shiyake leg. [OMD · 910629 · 004-6]; 2 ♂, the same locality and collector, 1.vii.1991 [OMD · 910701 · 001-2]; 3 ♂ & 4 ♀, Hokkaido Univ., Sapporo, 7.vii.1989, on flowers of *Filipendula kamtschatica*, S. Shiyake leg. [OMD · 890707 · 001-7]; 5 ♂ & 1 ♀, the same locality, collector and host plant, 16.vii.1989 [OMD · 890716 · 001-6]; 4 ♂ & 1 ♀, ditto, 14.vii.1990 [OMD · 900714 · 001-5]; 1 ♂, ditto, 13.vii.1991 [OMD · 9010713 · 001]; 1 ♂, Kitanosawa, Sapporo, 28.vii.1991, S. Shiyake leg. [OMD · 910728 · 001]; 1 ex., Mt. Moiwa, Sapporo, 25.vi.1975, S. Imasaka leg. (HATC); 1 ♂, Misumai, Sapporo, 11.vii.1991, on flowers of *Castanea crenata*, S. Shiyake leg. [OMD · 910711 · 001]; Toyotaki, Sapporo, 13.vii.1985, M. Ôhara leg. [OMD · 850713 · 001]; 1 ♀, Takino, Sapporo, 12.vii.1990, N. Kuhara leg. [OMD · 910712 · 001]; 1 ♀, Nagabashi Naebo area, Otaru, 15.vi.1991, M. Ôhara leg. (OTM); 1 ♂, Okusawa Suigenchi area, Otaru, 23.viii.1992, S. Shiyake leg. [OMD · 920823 · 005]; 1 ♂, the same locality and collector, 26.viii.1992, [OMD · 920826 · 001]; 1 ♀, Akaigawa, Ônuma, Oshima Prov., 13.vii.1990, M. Ôhara leg. [OMD · 900713 · 001]

[Honshu] 1 ex., Ashiu, Kyoto Pref., 28.vi.1973, T. Hatayama leg. (HATC); 1 ex., the same locality, 9.vi.1974, K. Masaki leg. (HATC); 1 ex., Sugi Pass, Kyoto Pref., 14.vi.1970, on flowers of *Symplocos coreana*, T. Hatayama leg. (HATC); 1 ex., Mt. Kojin, Nara Pref., 17.vii.1968, K. Matsuda leg. (HATC); 1 ex., Mt. Gagyû, Okayama Pref., 26.v.1974, A. Watanabe leg. (HATC).

[Shikoku] 1 ex., Ochiai Pass, Tokushima Pref., 11.vii.1976, O. Yamaji leg. (HATC).

[Kyushu] 1 ex., Mt. Unzen, Nagasaki Pref., 21.viii.1965, M. Noda leg. (HATC); 4 exs., the same locality, 6.viii.1973, S. Imasaka leg. (HATC); 1 ex., Mt. Ôkue, Miyazaki Pref., 29.vii.1969, M. Noda leg. (HATC).

Distribution: Hokkaido, Honshu, Shikoku, Kyushu.

Biology: This species has a strong habit of flower visiting.

Affinities: This species and the following new species, with the reddish or yellowish coloration on almost whole body, can easily be distinguished from the congeners: *F. chrysotrichia* (Nomura) is blackish brown to black on almost whole body; *F. satoi* (Nomura), *F. hananoi* (Nomura) and *F. inouei* (Nomura) are easily recognizable by the contrast of blackish general coloration and the reddish head or pronotum.

***Falsomordellistena hirasana* sp. nov.**

(Fig. 3)

Japanese name: Hirasan-hime-hananomi.

Description: Coloration (Fig. 3-A) basically yellowish brown, ridges on hind leg black, distal 7 segments of antenna dark brown.

Hairs on almost whole body blackish, humeralis of elytron, frons, metathoracic sternum, hind coxa, abdominal sterna and femur yellowish with luster.

Eye egg-shaped, without emargination and pubescent, facets fine. Tempora narrow, as wide as a facet. Antenna (Fig. 3-F) rather long, filiform and slightly serrate, 5th segment clearly larger than 4th, each of 5th to 10th 2.1 times in male and 1.6 times in female as long as wide. Maxillary palpus (Fig. 3-D) normal form of *Mordellistena*-type in both sexes, terminal segment securiform with short apical margin, penultimate segment not dilated. Pronotum a little wider than long, lateral margin substraight in profile and converging anteriorly when seen above, anterior and posterior angles broadly rounded at vertex, apical margin normally protrudent, basal margin broad and a little protruding. Scutellum small, rounded-triangular. Elytra 2.4 times as long as their humeral breadth, 2.7 times as long as pronotum, converged posteriorly, apices broadly rounded. Apical margin of anal sternum not emarginate in both sexes. Pygidium normally long as in *Mordellistena*, acuminate, about 1/3 in male and 1/4 in female as long as elytron, substraight when seen laterally.

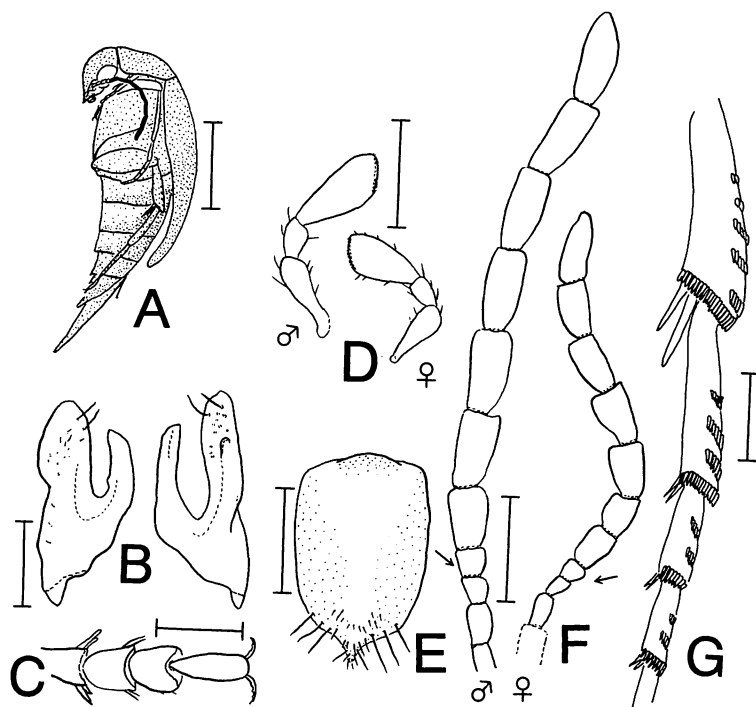


Fig. 3.

Falsomordellistena
hirasana sp. nov.

- A. Lateral view (♂);
- B. paramera of genitalia;
- C. distal segments of fore tarsus;
- D. maxillary palpi;
- E. 8th abdominal urosternum;
- F. antennae (4th segment arrowed);
- G. hind leg.

Scales: 0.25mm, except
B and C of 0.1mm
and A of 1.0mm.

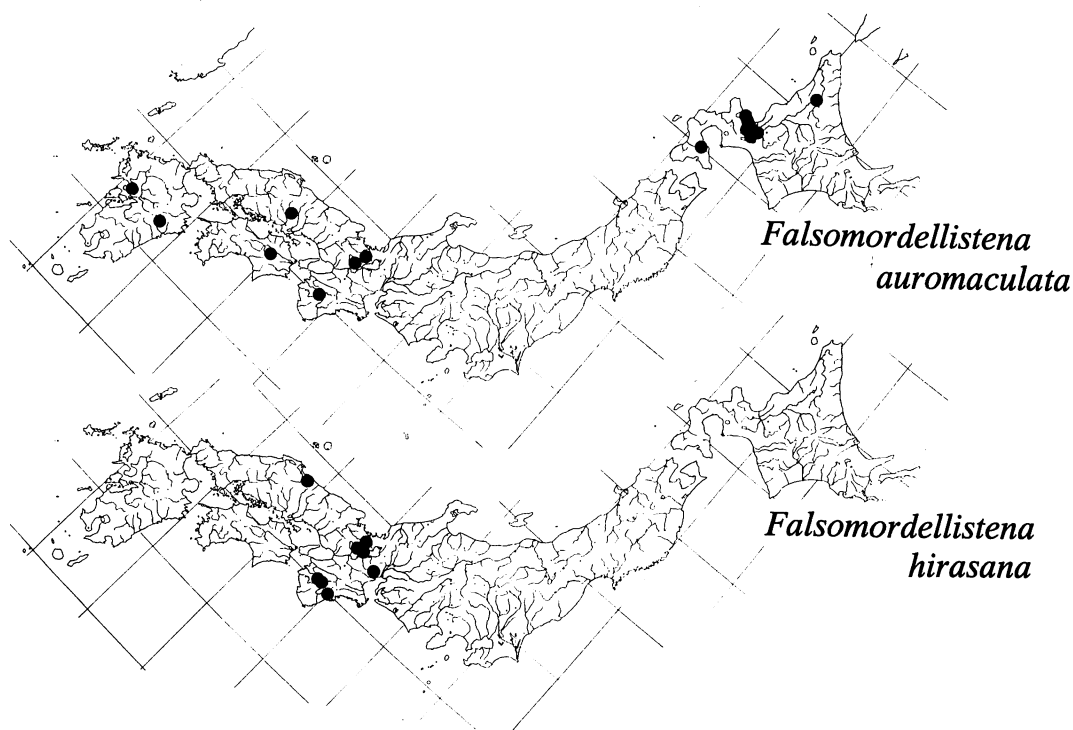


Fig. 4. Distribution maps of the two species.

Penultimate segment of fore tarsus (Fig. 3-C) 1.1 times as long as wide, dorso-apical margin a little emarginate. Penultimate segment of middle tarsus almost same as that of fore tarsus. Outer spur of hind tibia relatively long, nearly $3/5$ as long as inner one. Hind leg (Fig. 3-G) with rather short ridges, formulated as 4, 3, 2, 2; tibia usually provided with 4 (sometimes 5) short ridges, 1st tarsus with 3 (sometimes 4) short ridges, each 2nd and 3rd tarsus always with 2 oblique ridges.

Eighth abdominal urosternum (Fig. 3-E) in male 1.6 times as long as wide, apical lobe narrowly protrudent and sparsely hairy.

Paramera of male genitalia (Fig. 3-B) resembling those of *Mordellistena*; left parameron with main lobe which is normally thick, not compressed and apically hairy, basal process very slightly recognizable, ventral branch thick and shorter than the main lobe; right parameron with thick and wide main lobe, ventral branch stout, shorter than the main lobe and dorsally vent apically. Median lobe (aedeagus) rather normally long.

Body length: ♂ 3.2 - 4.1mm, ♀ 3.2 - 4.2mm.

Holotype: ♂, Mt. Hira (alt. about 500m), Shiga Pref., Honshu, 20.vii.1992, on flowers of *Hydrangea paniculata*, S. Shiyake leg. [OMTI · 59] [OMD · 920720 · 001] (deposited in the Osaka Museum of Natural History)

Paratypes: 1 ♂ & 4 ♀, the same data as the holotype [OMD · 920720 · 002-6]; 1 ♂ & 1 ♀, Mt.

Gozaisho, Mie Pref., 25.vii.1976, S. Kato leg. (HATC); 2 ♂ & 1 ♀, Yunoyama, Mie Pref., 14.vii.1957, M. Goto leg. [OMD · 570714 · 007-9] (deposited as M. Goto Collection); 1 ♀, Ashu, Kyoto Pref., 14.vii.1970, T. Hatayama leg. (HATC); 1 ♂ & 1 ♀, the same locality, 16.vii.1992, on flowers of *Hydrangea paniculata*, S. Shiyake leg. [OMD · 920716 · 002-3]; 1 ♂, Pass Sugi, Kyoto Pref., 21.vii.1975, S. Imasaka leg. (HATC); 1 ♂, Mt. Obako, Nara Pref., 30.vii.1974, T. Hatayama leg. (HATC); 1 ♀, Mt. Gomadan, Kii-Arida, Wakayama Pref., 1ex., Hanaore, Kitayamakyo, Wakayama Pref., 31.vii.1951, Y. Shibata leg. [OMD · 510731 · 001]; 1 ♀, Mt. Daisen, Hohki, Tottori Pref., 21-22.vii.1958, H. Aoki leg. [OMD · 580722 · 001] (deposited as H. Aoki Collection).

Biology: This species has a strong habit of flower visiting.

Affinities: This species is allied to *F. auromaculata* (Kôno) which is precedingly redescribed, but can be easily distinguished by the smaller body size (less than 4.5mm), the lighter coloration and the shape of male genital organs including 8th urosternum.

Remarks: These two species has surely been in confusion because some specimens I newly designated as paratypes bear determination labels as *F. auromaculata*.

Acknowledgment

I would like to express my gratitude to Prof. Sadao Takagi, Prof. Tosio Kumata, Dr. Masaaki Suwa and Dr. Shin'ichi Akimoto (Systematic Entomology, Faculty of Agriculture, Hokkaido University, Sapporo City) in inspection of the type specimen and encouragement. Dr. Masahiro Ôhara (Otaru Museum, Otaru City, Hokkaido) gave me opportunity to examine the insect collection, helped me in many ways and constantly encouraged me. Mr. Takeichirô Hatayama (Sumiyoshi-ku, Osaka City) kindly let me examine his abundant insect collection and gave me valuable comments. Mr. Naotoshi Kuhara (Chitose City, Hokkaido) also offered me useful specimens.

Literature Cited

- Ermisch, K. 1950. Die Gattungen der Mordelliden der Welt. Entomol. Bl. Biol. Syst. Käfer **45/46** (1949/50): 34-92.
- Hatayama, T. 1985. "Mordellidae: Mordellistenini" Kurosawa, Y. *et al* ed., The Coleoptera of Japan in color **III**. Hoikusha, Osaka, p.387-397, pl. 67 (in Japanese).
- Kôno, H. 1928. Die Mordelliden Japans (Nachtrag). Trans. Sapporo nat. Hist. Soc. **7**(2): 29-46.
- Kôno, H. 1936. Family Mordellidae. Sanseido, Tokyo, 79p. (Fauna Nipponica **10**(8-1)) (in Japanese).
- Nakane, T. 1957. The beetles of Japan (36). Shin-kontyû **10**(7): 55-61 (in Japanese).
- Nomura, S. 1951. Zur Kenntnis der Mordellistenini aus Japan, Korea und Formosa. Tôhō-Gakuhô (1): 41-70.
- Nomura, S. 1961. Some new species of the Coleoptera from Japan. Tôhō-Gakuhô (11): 70-89.
- Nomura, S. 1963. "Mordellidae" Nakane, T. *et al.*, Iconographia Insectorum Japonicum Colore naturali edita II. Hokuryûkan, Tokyo, p. 247-255, pl.124-128. (in Japanese)
- Nomura, S. 1967. The Mordellidae from Formosa. Entomol. Rev. Jpn **19**(1): 5-34.
- Tokeji, M. 1953. Some notes on the Mordelline-beetles from Japan and Saipan Island. Chûhō (8): 1-22

